



# Opportunities for Cartographers and Cartographic Technicians

Cartography is the science of making maps. The U.S. Geological Survey (USGS), is the Federal government's principal civilian map-making agency and employs a large number of cartographers and cartographic technicians. As the technology involved in mapping and related fields has changed, the work of cartographers and cartographic technicians has diversified considerably.

USGS cartographers make paper and digital maps. They also work on a wide variety of geographic, cartographic, and remote sensing projects. For example, they produce digital cartographic data sets that are used in geographic information systems. They produce images from digital information received from earth-orbiting satellite sensors and develop standards for the exchange of digital geospatial data among various users and disparate systems. Cartographic technicians compile and revise paper and digital maps and related cartographic products. Drafting, digitizing, editing, and reviewing these products are some of the functions performed by cartographic technicians.

USGS cartographers and technicians are employed mostly in the National Mapping Division, with facilities in Reston, VA; Rolla, MO; Sioux Falls, SD; Denver, CO; and Menlo Park, CA.

## Qualifications for Cartographers:

Basic qualifications for the cartographer series, GS-1370, are a Bachelor's degree with at least 30 semester hours of cartography, related physical science, computer science, or physical geography. This work must also include at least 6 semester hours of college-level non-business mathematics. Candidates may also meet the basic requirements at the GS-5 level with a combination of experience and course work described above. Candidates who meet the basic requirements will also qualify at GS-7 if they meet the criteria for

Superior Academic Achievement\*. Otherwise, applicants for positions at GS-7 and above must have additional professional experience or directly related graduate education.

## Qualifications for Cartographic Technicians:

Cartographic technicians may qualify based on education, experience, or a combination of both as follows:

GS-3: A year of study including at least 6 hours of such course work as cartography, relevant mathematical or related science such as physical geography or geodesy with not more than half the required course work in math or statistics or six months of general experience.

GS-4: 2 years of study with at least 12 hours in any combination of courses such as those listed for GS-3 or six months of specialized experience.

GS-5: Bachelor's degree with at least 18 hours in courses such as those listed above. Acceptable courses would include cartography, astronomy, geodesy, photogrammetry, oceanography, computer science, land surveying, geophysics, remote sensing, algebra, trigonometry, and calculus or one year of specialized experience.

GS-6 and above: Candidates for cartographic technician positions above GS-5 must have graduate education or additional directly related experience in such areas as cartographic research, control, base sheet, manual or photogrammetric compilation, mosaic, drafting and scribing, editing or review, or digitizing.

The USGS is an equal opportunity employer and does not discriminate based on race, color, national origin, gender, religion, age, non-disqualifying handicap conditions, or any other non-merit factors.

\*Superior Academic Achievement requires: membership in a national scholastic Honorary Society above the freshman level; or standing in the upper third of the class; or an overall GPA of 3.0 or higher; or a GPA of 3.5 or higher for all the work in the major as computed on 4 years of education or during the final 2 years of the curriculum.